

Title (en)
METHOD FOR PRODUCING A MULTILAYER COATING, OPTICAL ELEMENT AND OPTICAL ARRANGEMENT

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER MEHRSCHICHTIGEN BESCHICHTUNG, EINES OPTISCHES ELEMENTS UND EINER OPTISCHEN ANORDNUNG

Title (fr)
PROCÉDÉ DE PRODUCTION D UN REVÊTEMENT MULTICOUCHE, ÉLÉMENT OPTIQUE ET AGENCEMENT OPTIQUE

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Application
EP 09761365 A 20090514

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Abstract (en)
[origin: WO2009149802A1] The invention relates to a method for producing a multilayer coating (17) for reflecting radiation in the soft X-ray or EUV wavelength range on an optical element (8, 9) which is operated at an operating temperature (Top) of 30° or more, preferably of 100°C or more, particularly preferably of 150°C or more, in particular of 250°C or more, comprising the following steps : determining an optical design for the multilayer coating (17) which defines an optical desired layer thickness (nop dop) of the layers (17.1, 17.2) of the multilayer coating (17) at the operating temperature (Top), and applying the layers (17.1, 17.2) of the multilayer coating (17) with an optical actual layer thickness (nB dB) chosen in such a way that a layer thickness change (nop dop - nB dB) caused by thermal expansion of the layers (17.1, 17.2) between the coating temperature (TB) and the operating temperature (Top) is compensated for. The invention also relates to an optical element (8, 9), produced in particular according to the method described above, and a projection exposure apparatus comprising at least one optical element (8, 9) of this type.

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